

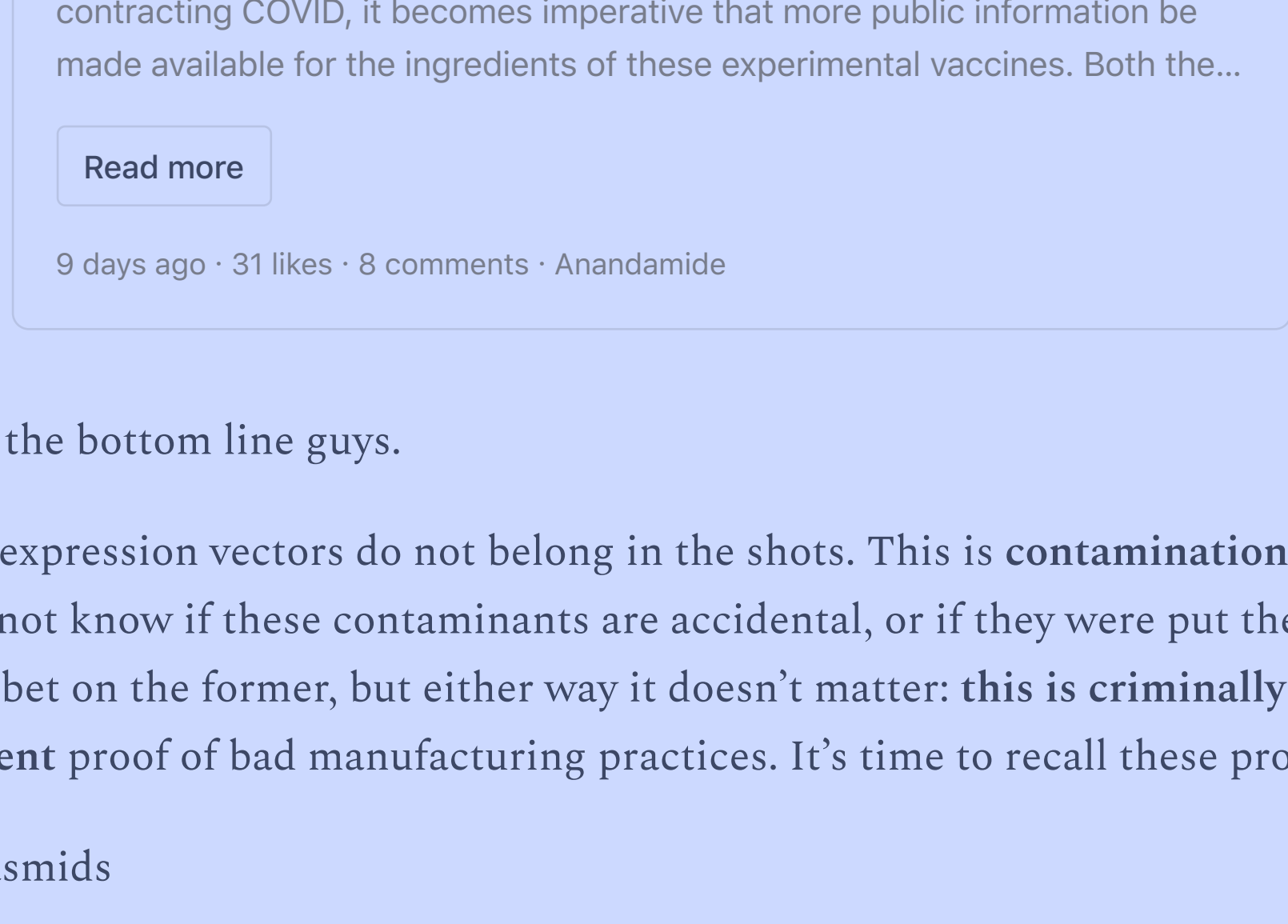
# Contamination with antibiotic/spike-containing expression vectors in the COVID-19 modified mRNA products

The bivalent products were sequenced and the result is not good.

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Anandamide has published a Substack today that everybody needs to understand. The gist of the findings following sequencing of the Moderna and Pfizer bivalent COVID-19 products is that there is a high level of dsDNA contamination in the Pfizer products. This dsDNA contamination is in the form of circular expression vectors containing a spike gene and two antibiotic resistance genes for kanamycin and neomycin.



Here's the bottom line guys.

These expression vectors do not belong in the shots. This is contamination and we do not know if these contaminants are accidental, or if they were put there. I would bet on the former, but either way it doesn't matter: this is criminally negligent proof of bad manufacturing practices. It's time to recall these products.

On plasmids

Plasmids are small circular DNAs that replicate separately from host cell DNA. Plasmids are primarily of bacterial origin, but can also exist naturally in archaea and eukaryotes such as yeast and plants.<sup>1</sup> Plasmids can differ in size and number of copies in a cell and can append properties to cells.<sup>2</sup> Importantly, plasmids (→ plasm (moldable) and id (from)<sup>3</sup>) are frequently used in the laboratory setting to transform bacterial cells to induce expression of specific genes, including antibiotic genes. So they aren't some out of the ordinary space creatures that came down from the ubiquitous UFOs reigning down on the humans these days. They are extremely commonly used in lab context. Figure 1 is a mock-up generic construct showing how easy it is to insert genes of choice such as antibiotic resistance genes and genes that encode things like the spike protein. They are 'turned on' using specific promoters and the origin of replication allows the plasmid to initiate replication by recruiting replication machinery proteins.

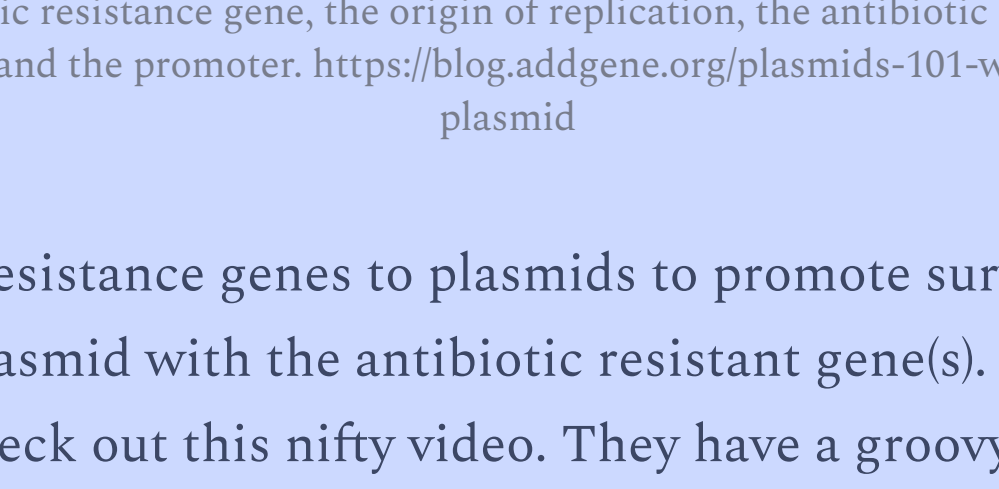
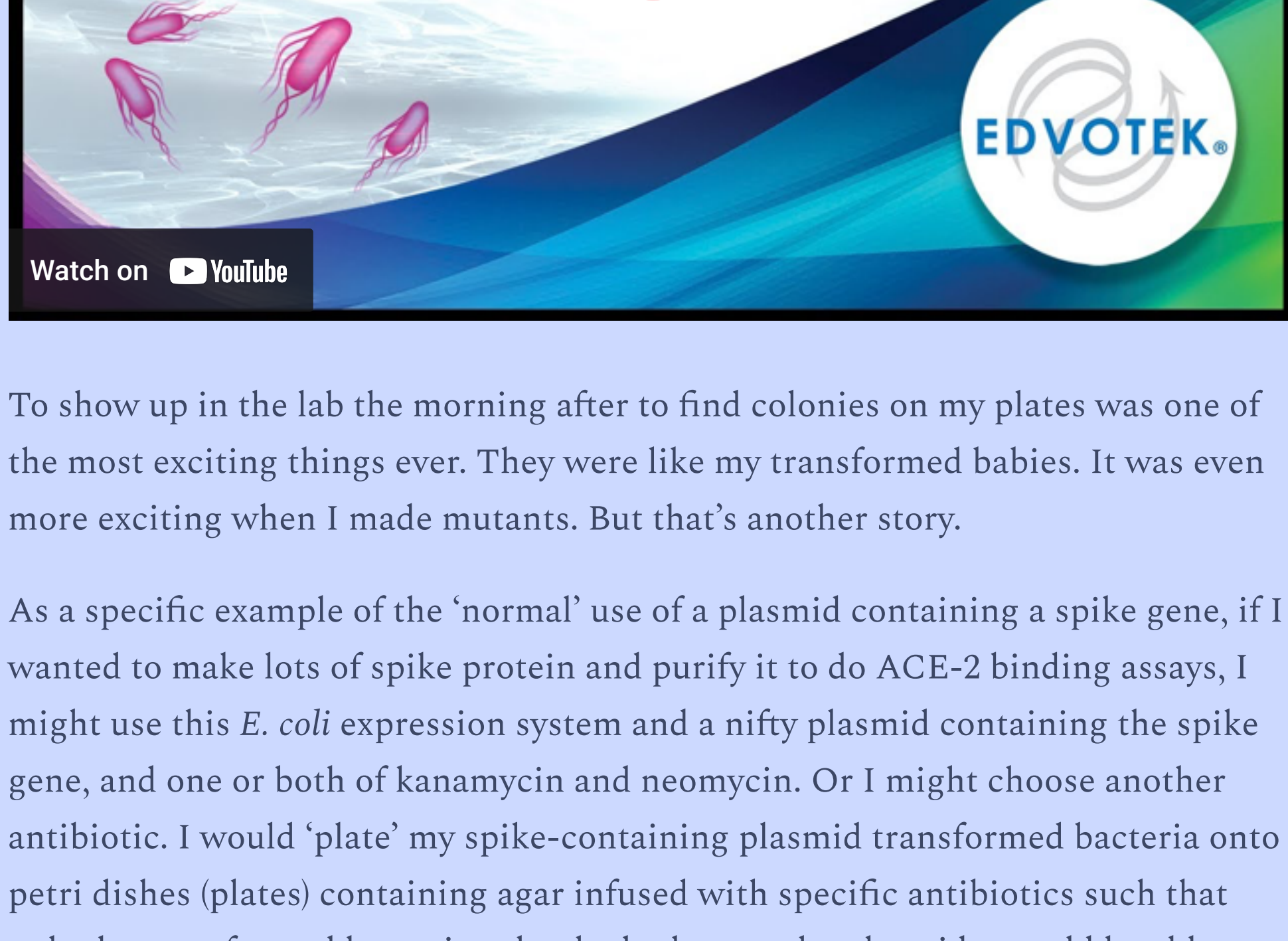


Figure 1: Map of a plasmid showing the inserted gene of choice (say, spike), the antibiotic resistance gene, the origin of replication, the antibiotic selection marker and the promoter. <https://blog.addgene.org/plasmids-101-what-is-a-plasmid>

We add antibiotic resistance genes to plasmids to promote survival of the bacteria that 'take up' the plasmid with the antibiotic resistant gene(s). If you want to learn more about that, check out this nifty video. They have a groovy nerdy bass line in this one too.



To show up in the lab the morning after to find colonies on my plates was one of the most exciting things ever. They were like my transformed babies. It was even more exciting when I made mutants. But that's another story.

As a specific example of the 'normal' use of a plasmid containing a spike gene, if I wanted to make lots of spike protein and purify it to do ACE-2 binding assays, I might use this *E. coli* expression system and a nifty plasmid containing the spike gene, and one or both of kanamycin and neomycin. Or I might choose another antibiotic. I would 'plate' my spike-containing plasmid transformed bacteria onto petri dishes (plates) containing agar infused with specific antibiotics such that only the transformed bacteria - that had taken up the plasmid - would be able to grow on the plates. And then I would give a lot of food and love to those bacteria and over-express my spike protein. Then I would purify it and use it in binding assays. Or whatever.

My point is, we do this all the time in the lab and it's brilliant and cool.

What *isn't* brilliant or cool is that kanamycin/neomycin/spike-containing expression plasmids were found at high levels - levels that exceed the EMA specified dsDNA limits for these COVID-19 injectable products (they should be below 0.33% (330pg/mg)) - in the case of the Pfizer products, specifically. The Moderna products also showed these contaminants, however.

Anandamide writes:

While the Moderna vaccines are meeting this specification, the Pfizer [injectable products] are 10-fold higher in contamination with 1 DNA molecule per 350 mRNAs. This is 1 replication competent plasmid per 350 mRNA molecules and equates to billions of antibiotic resistant plasmids injected per person per shot.<sup>4</sup>

Billions. What effects are these plasmids having on the cells in the gut and the microbiome in general?

The most important questions that I have are:

- How did these plasmids get into the LNPs?
- Do the bacteria in the 'host' (that's you) microbiome express the spike protein from these plasmids?

Take a look at this article posted by The Wall Street Journal back in March 2021. It was written by By Jared S. Hopkins, Joel Eastwood and Dylan Moriarty and it's quite a decent step-by-step description of how these modified mRNA products get to you.

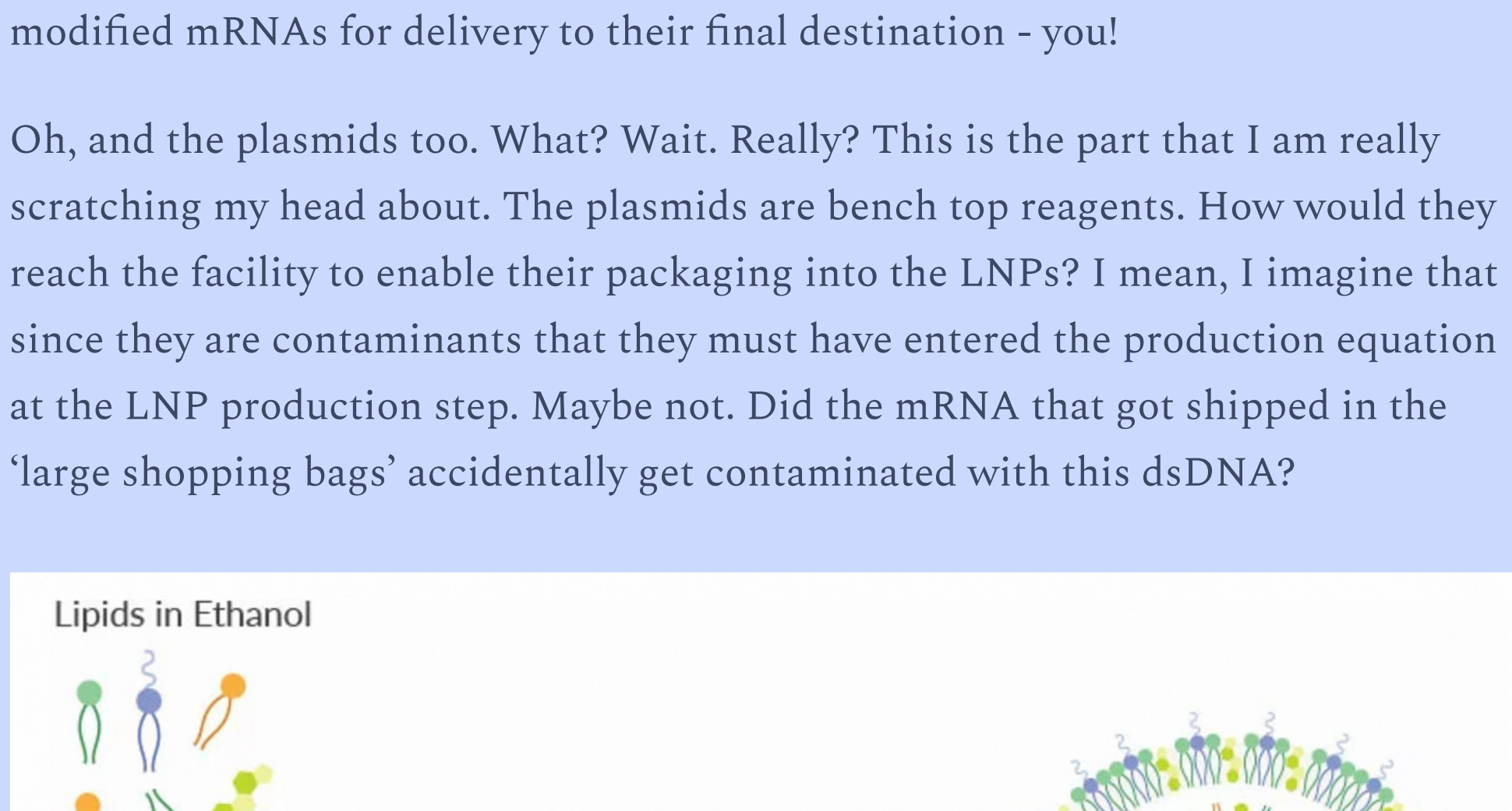


Figure 2: [https://www.wsj.com/articles/mrna-covid-19-vaccines-are-fast-to-make-but-hard-to-scale-11614776401?mod=article\\_inline](https://www.wsj.com/articles/mrna-covid-19-vaccines-are-fast-to-make-but-hard-to-scale-11614776401?mod=article_inline)

They write:

At a Pfizer plant in Michigan, a formulation suite designed by the drugmaker—the size of a one-car garage—is crisscrossed by pumps and pipes, and crowded with tanks, filtration units and half-dollar size jet mixers. This is where the mRNA is encapsulated in the lipids.

Sounds high tech right? Pumps and pipes and tanks all humming in unison to mix those 4 lipids - all at the perfect specific concentrations - with the modified mRNAs, to form these perfectly perfect little nanospheres safely encapsulating the modified mRNAs for delivery to their final destination - you!

Oh, and the plasmids too. What? Wait. Really? This is the part that I am really scratching my head about. The plasmids are bench top reagents. How would they reach the facility to enable their packaging into the LNPs? I mean, I imagine that since they are contaminants that they must have entered the production equation at the LNP production step. Maybe not. Did the mRNA that got shipped in the 'large shopping bags' accidentally get contaminated with this dsDNA?

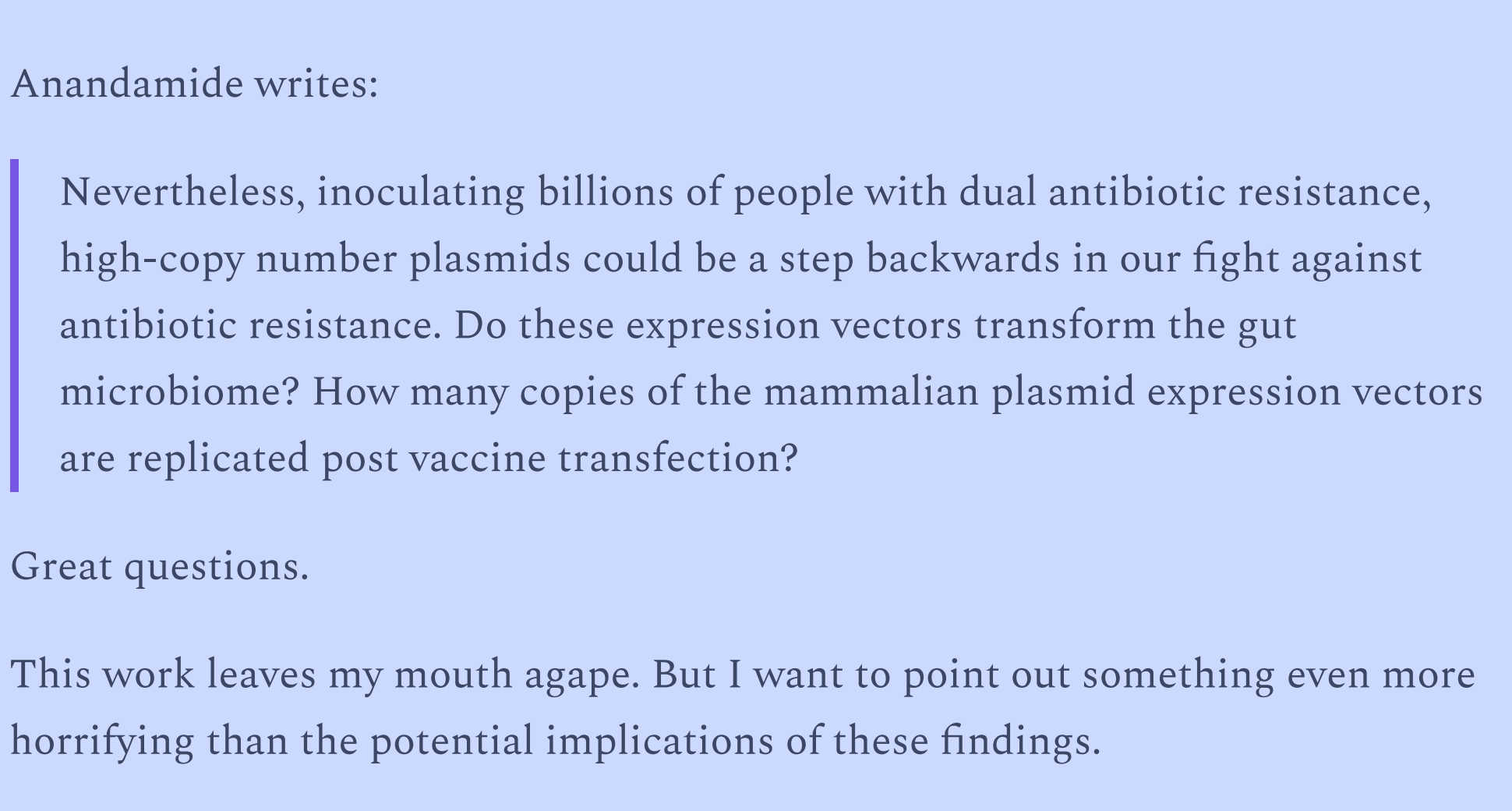


Figure 2: Schematic of oligonucleotide-containing LNP formation. Figure 3: Adapted from Figure 2 in 'Mixing' section from <https://www.caymanchem.com/news/intro-to-lipid-nanoparticle-formulation>

Ruh Roh, as Jikky would say, quoting Scooby Doo. Did those plasmids make their way into the 'empty space' in the LNPs?

Here is an excellent write-up of a comprehensive investigation into the supply chain of the Pfizer-BioNTech and Moderna COVID-19 injectable products. This article describes almost everything you could ever want to know about microfluidic mixing and LNP and modified mRNA mixing/combination. In their concluding remarks they write:

Technically, the last step of the supply chain of these mRNA COVID-19 vaccines is the production of the spike protein. That's what happens in the cells of your body after you receive the vaccine. You are the globally distributed vaccine manufacturing revolution.

Yes. You are. And apparently, you are not only a spike manufacturing plant but you might also be an antibiotic resistant bacteria plant whereby these bacteria may also be expressing spike protein! We don't know yet, but... WHAT IF?

Anandamide writes:

Nevertheless, inoculating billions of people with dual antibiotic resistance, high-copy number plasmids could be a step backwards in our fight against antibiotic resistance. Do these expression vectors transform the gut microbiome? How many copies of the mammalian plasmid expression vectors are replicated post vaccine transfection?

Great questions.

This work leaves my mouth agape. But I want to point out something even more horrifying than the potential implications of these findings.

The only reason we know this now is because an independent researcher (not sponsored by Pfizer) took it upon himself to sequence these products, do fragment analyses and create RNA-Seq libraries, for example, and to reveal his findings out of respect for both open science and PEOPLE.

Remember when Pfizer wanted to hide their clinical trial data for 75 years? Remember how both Moderna and Pfizer continue to hide behind the idea of 'trade secrets' as the reason for not disclosing the sequences for their modified mRNAs? Remember how there was ZERO trial/testing done for the so-called bivalent products that they are pushing on everyone now? Well hey! Guess what? In random samples of these bivalent products, there's dsDNA contamination involving antibiotic resistant genes.

NOW WE KNOW.

The fact that this contamination got past all their quality control 'measures' - in place to prevent contaminated products from reaching people - is quite appalling. Quality assurance is in question. The commercial batches are not only likely of low %mRNA integrity, but might also be contaminated with antibiotic resistant spike gene-containing plasmids.

We need to reproduce these results and make it an absolute priority to STOP THE SHOTS and to recall all of them and test the hell out of individual batches and vials for all manufacturers. Then we need to work on solutions to help people who have been injured.

According to a VAERS query, there are 45 (0.003%) reports with indications of kanamycin and/or neomycin use in the individual who filed the report. When I narrow the query to only include the bivalent shots, I get 2 (0.009%) reports so the numbers are indicative of nothing so far, but I am going to keep an eye on this.

There's no telling what might begin to arise reporting-wise in VAERS.

Exercising something called the Precautionary Principle might be a good idea now.

One more thing, the bivalent shots are a nightmare already even without this new evidence to support the cessation of their use.

